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An investigation of wiki as a company's communication and knowledge management tool

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Wiki is a social media channel. It is an information storage site, which can be edited by anyone. The main idea in wiki is that it uses peoples' knowledge to create the content. In companies internal communication wiki has restricted access due to data privacy. Wiki can be used inside companies as a brainstorming place and for example as a place to store project documentation.

This thesis is done as a research project for a company, referred as Company X, which is an international Information Technology (IT) company. The research is assigned inside Company X to Department X, which has approximately 1000 employees. The purpose of this case study was to investigate the wiki application and how it could work as the Department X's internal communication channel. The second purpose was to make an initial implementation plan based on the research findings. The methods used to investigate the research questions were interviews and a SWOT analysis. Four persons from Department X were interviewed to get an overall opinion of wiki. The goal of the SWOT analysis was to investigate the team's strengths, weaknesses, opportunities and threats related to the wiki application.

The findings conclude that the wiki application can be considered as useful for Department X. Due to the findings an implementation plan, which described what is needed in order to implement wiki inside Department X, was made. The research supports the assumption that wiki can be used as a part of an effective communication and knowledge management. However, other aspects of knowledge management should be investigated before implementation.

Key words: wiki, social media, knowledge management

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Wiki on sosiaalisen median työkalu, johon yksilöt voivat luoda, lisätä ja muokata tietoa. Wikin pääajatuksena on käyttää hyväkseen ihmisryhmän älykkyyttä olemalla avoin kaikille. Wikin tarkoituksena on loda tietoa yksilöllisesti, mutta yhteisöllisesti. Yrityksen sisäisissä wikeissä käyttäjäryhmä on kuitenkin rajattu tietoturvallisuus syistä. Näissä rajatuissa käyttöjäryhmissä wikiä voidaan käyttää ideoide luonti ja kehitys paikkana.

Tämä opinnäytetyö on tehty kansainvälisen IT alan yrityksen osaston käyttöön, johon viitataan Osasto X:nä ja jossa on noin 1000 työntekijää. Tarkoituksena oli tutkia, kuinka wiki toimisi Osasto X:n sisäisen viestinnän kanavana ja näiden tulosten perusteella tehdä alustava käyttöönottosuunnitelma. Tutkimusmenetelminä käytettiin haastatteluja ja SWOT analyysiä. Neljää Osasto X:n työntekijää haastateltiin, jotta saatiin selville henkilöstön milipide ja suhtautuminen wikiin. SWOT analyysin tavoitteena oli tutkia Osasto X:n vahvuuksia, heikkouksia, uhkia ja mahdollisuuksia wiki sovelluksen kannalta.

Tuloksena todettiin, että wiki olisi hyödyllinen Osasto X:lle ja näin ollen se kannattaisi ottaa käyttöön. Tästä johtuen tehtiin alustava käyttöönottosuunnitelma, joka kuvaa mitä kaikkea tarvitaan wikin käyttöönottoon. Tämä tutkimus tukee oletusta, että wikiä voidaan käyttää tehokkaana tiedon johtamisen ja viestinnän välineenä, mutta tiedon johtamisen muut näkökulmat olisi syytä tutkia ennen wikin käyttöönottoa.

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1 Introduction

Social media is important at the moment. As the Internet has developed to web 2.0, all the aspects of social media have become key factors in companies. Wiki is seen as one of the good knowledge management tools inside companies. As an example on July 29 in 2009, Il-talehti published an article, which stated that over half of the doctors in America use Wikipedia as a knowledge source. Maybe this is not always good as wiki is open for everyone and it may also include incorrect information. It is inevitable to have incorrect information in wiki if the purpose of wiki is to gather as much information as possible by being open to everyone.

This thesis is planned together with a global IT company. The company will be referred to as Company X. This thesis investigates the opportunities of social media in internal communication and wiki as a social media channel. It describes the essentials of the wiki application and investigates the opportunities and threats of the Department X's team related to the use of wiki.

The idea for the research began when Department X wanted to investigate, how the social media could be used within internal communication. Company X has all the needed resources and knowledge to build a wiki application from the technical point of view, but it wanted to know, if the wiki could be implemented in Department X. This thesis will look at the communication issues and leave the technical aspects out its scope as they are already managed within Company X. The objective of this thesis is to investigate, if the team is ready for wiki as a part of internal communication and to build an initial implementation plan. The research will also access the problem of the possible threats and try to give answers as to how to avoid them.

The purpose of this thesis is to answer to following questions:

- What type of communication channel is wiki?
- What are the Strengths, Weaknesses, Opportunities and Threats (SWOT) of the team regarding the wiki application?
- What is the preliminary implementation plan?

Methods used to achieve the answers to the questions above are

- To investigate existing literature and use of a wiki application
- To interview some of Company X's personnel, who are meant to use this application in order to increase their general perspective.
- To investigate, what is needed in Company X for the wiki project

The goal is to have an initial implementation plan to start the wiki project inside the company. This plan should investigate what and who is needed for this project, in other words what are the needed resources.

The team specific information should be added to the wiki application, for example process descriptions, how to -documents and other useful information. Special attention should be given to issues such as how or in what way project organization can benefit from the wiki application and to the fact that the project teams need large amounts of information from several technologies and practises. Everybody within the scope of the project should be able to add texts to the wiki. There should also be a comment box below every text, where everybody can add their comments about the text and additions, corrections and tips when needed. This would work as 'a brain storming' place, where everyone could also add their suggestions on how to handle the issues.

Wiki is good way of bringing people together and to conduct brainstorming. Account specific wiki could include account's newsletter and blogs. Document versioning would ensure a full revision history of the files maintained. In this way the wiki application is part of the team's knowledge management. Wiki would function in Company X's intranet and access would be granted to a specific user group. Some of the existing information found from the Share Points, Intranet and Group Shares could be linked to the wiki system.

2 Theoretical Framework

This chapter will consider theory related to wiki and will provide more in depth information about this application. The wide range of concepts also deals with crucial issues of knowledge management. This chapter also covers other basics of this study including hypothesis and methodology used to carry out this research that has been presented in a form of a case study.

2.1 Concepts

The concepts used in this thesis are:

- Social media
- Web 2.0
- Wiki application
- RSS-feeds
- Tacit knowledge

Social media means applications, which are based on the user generated content. The concept of social media is based on three factors: content, society and web 2.0. Social media is based on the user generated content, which can be new, modified or categorized. Web 2.0 provides the needed technology for social media to work. These two combined enable the creation of the sense of community. The new technology of Web 2.0 has enabled new communities, which are not time or place dependent. Social media applications are typically: participatory, open, conversational, have networking capacity and collective. (Kangas, Toivonen & Bäck 2007, 14-15)

Web 1.0 has developed to Web 2.0 due new technology, which allows more efficient and diverse use of web. The interaction through web has increased tremendously. Blogs, wikis, podcasts and RSS feeds are only examples of the new features through which people can interact in the web. Everyone is now able to participate in creating them. (Anderson 2007, 5-6; O'Reilly 2005)

Internet has developed from one way communication channel to another channel, where everyone can participate and communicate. The new inventions for example have ability to edit pages, web cameras and net meeting have taken advantage of the development of social media in web. Web 2.0 enables people to interact more efficiently than ever and there is no need to go to the library to search for information as almost everything is available in the internet. (Anderson 2007, 5-6)

Wiki is an information storage system, which can be edited by anyone. Wiki use peoples knowledge as the source of information and therefore all persons who have access to wiki, are capable of uploading new items and editing the existing ones. Wikis show always the previous versions of the text so that they can be examined when needed. The main idea behind wiki applications is to spread the information efficiently. To achieve this, wiki needs to be open for everybody. The open social environment of wiki supports the creation of 'the collective intelligence'. Wiki also boosts the co-operation and the sense of community because the open social environment. The structure of the wiki needs to be well planned in advance and it can not be changed by any other than the moderators. This helps the wiki to be systematic structured and well organized. (Anderson 2007, 43, 46, 48-49; Barr, Burns & Sharp 2005, 19-20)

RSS-feeds are notifications, which show if the information in the wiki application has been changed. RSS-feeds enable users to be aware what's going on in the wiki. It also helps the users to be aware when their own writings have been modified. Especially the RSS-feeds are useful for the moderator who needs to be aware of the changes inside the wiki in order to maintain the control. (Ojala & Pöysti 2008, 32)

A tacit knowledge is knowledge, which is hard to describe in words because a person might not even know that he knows it. A good example from this is riding a bike. How do you explain to a person, who does not know how to ride a bike, how to do it without falling down? The problem is that the tacit information is not stored anywhere because persons do not know how to add it anywhere. This causes unawareness of some essential information and can cause information loss in the company, when person leave the company. The data loss can be very crucial to a company's business.

2.2 Knowledge management

Knowledge has become one of the companies' essential assets in success, which is the main reason, why the companies want to take care of their knowledge management. However, as the knowledge is an abstract issue, it is difficult to manage and therefore it should be modified into an explicit form, so that it would be easier to manage. (Virtainlahti 2009, 70)

Knowledge management includes information detection, storing, distribution and use. It is often divided into two dimensions. The first one focuses on the effective information management through information systems and the second category focuses on the processes in which the information is being developed through learning and then further distributed to the members of the organisation. (Virtainlahti 2009, 70)

According to Otto Scharmer, the development process of knowledge management can be divided to three steps. In the first step the information is being modified to the explicit form through the information technology. In this step the information is seen as an objective which needs to be modified. In the second step the information is seen as tacit knowledge, a cognition process, which is combined to peoples' actions. In this phase the knowledge management is focused to the interaction of the tacit knowledge and the explicit information. The goal of the second step is to reform the tacit knowledge into the organization's information. In the third step the knowledge management is focused on thinking, which enables the development of the processes and the tacit knowledge. (Virtainlahti 2009, 70-71)

Most companies are in the first or second step. (Virtainlahti 2009, 71) Also Company X is between the first and the second step, as there have been efforts in the forming of tacit information to the current SharePoint structure. However it has been noticed that this system in the Department X is not as effective as the Company X would want it to be. This is why the wiki is to be investigated.

2.3 Wiki application

Wiki is a social networking tool that connects people and because everybody can contribute, a sense of ownership and self-policing usually develops within wiki's community. Wikis are faster than traditional methods of delivering Web content, where one or a few people write and edit the material. Wiki content can be developed at a much faster rate, since it empowers everyone to contribute. Wikis develop faster when everyone does their share of fixing problems, correcting grammar, adding facts, etc. This radical collaboration can be unsettling to some, but this is the purpose of a wiki. If people don't want their content edited by others, it shouldn't be on a wiki. The point of a wiki for most of the people is to collaborate on the same content. Discussions, debates and even arguments that arise during consensus-building can produce neutral content.

The application was developed in 1995 by Ward Cunningham, who invented the first wiki application. Wiki is Hawaiian and it means "fast". The purpose is to ease the information creation, editing and information finding. Wikis use simplified mark-up language or a WYSIWYG text editor. There are several different types of wiki softwares, which can be used. In this case the Microsoft services-based software is used, as it is already being used in Company X. Windows SharePoint Services (WSS) provides all the objects for the SharePoint services and in its latest version SharePoint 2007, also the blog, wiki and RSS feed features have been included.

Good example of a well known wiki is Wikipedia. According to Wikipedia's statistics, it includes 3 091 241 content pages, which have been edited 346 010 388 times since it was established. There are 10 961 832 registered users who edit and add text in Wikipedia. Wikipedia is the most popular wiki on the web. It is even more popular than MySpace, which has been really popular especially in United States. (Wikipedia) The easiness in editing texts makes the Wikipedia as popular as it is right now. It is essential to remember that Wikipedia is an encyclopedia of general information about several different topics but does not provide much detailed information on any issue. In contrast, individual wikis can contain a large amount of in depth information only on one specified topic.

An example of an individual wiki is Crime Scene Investigation (CSI) fan wiki. This wiki has been created for fans. It includes all kinds of information regarding the CSI series and it is a place where the fans can discuss the series with other fans. It includes CSI news, cast, characters, spoilers, fantasy teams and many other details about the popular television show. (CSI: Fan Wiki) The main idea behind this fan wiki is to gather the fans together and share thoughts. This is what the team wiki is also all about. Department X's wiki will work the same way, only the topics are to be different; Customer X.

2.3.1 Initial structure and layout

The wiki application should be planned well in advance of the release. There should have been already basic information added to the wiki, for example the links to the main process descriptions and essential tips and information. There should also be various questions concerning the different technologies inside Department X. This would make it easier for the users to participate to the creation of the content. The layout should be explicit so that it would be easy to use. At the beginning of the wiki project, the layout and structure should be planned to fit to the Company X's existing layouts (colours, themes and structures).

Initial structure could be as follows

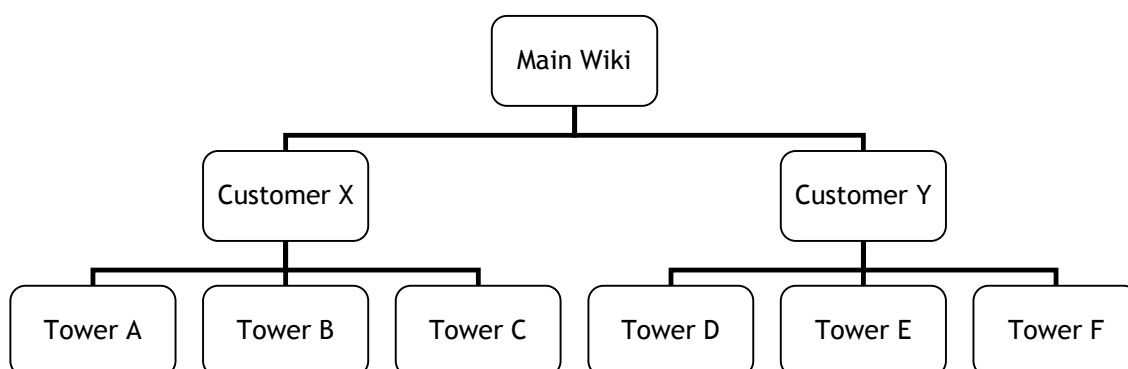


Table: 1 Structure of the wiki

The main wiki would contain all the general information, to which all the Company X's employees would have access to. The Second stage wikis would include all the customer related information. There could be several wikis, one for each customer. The classified deep technical information, which can not be shared outside the team, would remain in the current Share Points. This means that there would be several wikis, which would communicate with each other and would therefore ease the information search. Different projects and towers could have their own wiki's to discuss the on going subjects. However, in wiki project of this thesis, the goal is to plan the main wiki and the sub wiki for Customer X. If the need for the sub wikis would occur, they could be easily created afterwards.

2.3.2 Wiki application inside the company

Wiki could replace emails, intranet, littoral documents, project documentation and idea development process. Wiki can replace emails when it is used with the RSS-feeds. This is because the user can spread all the needed information through wiki and can get the replies

also through wiki. When the RSS-feeds are used, the user can get the information when he has received the replies without checking them from the wiki. (Otala & Pöysti 2008, 49-53)

Intranets are usually difficult to update and they can be updated just by few persons. Wiki can replace a company's Intranet, if it is used with the blogs. In this way everyone can participate in the content creation, which reduces the amount of outdated information. All the information found from the intranet can also be placed in the wiki. (Otala & Pöysti 2008, 49-53)

Usually littoral documents are created by one person. When the document is ready it is printed and sent to others by post. After this the document is stored by every individual by themselves, which is slow and for the environment non-friendly procedure. It is also difficult to evaluate the person's activity in this process. Wiki can replace these kinds of processes and make things faster and more effective. (Otala & Pöysti 2008, 49-53)

Quite often in the project reporting process, the project manager sends the reporting template by email to the person, whose contribution is needed. After this the report will be modified according to the comments, which is a slow and difficult process. In the wiki environment the process reporting template could be added to the wiki where all the contributors could alter the document. When the texts are easy to edit, there will most likely be idea creation and pondering in the wiki. (Otala & Pöysti 2008, 49-53)

In several cases idea development is done during a meeting after which the ideas are later organized at information gathering. Through wiki all the users can attend the idea creation and further develop the existing ideas. (Otala & Pöysti 2008, 49-53)

2.3.3 Advantages and disadvantages of the wiki application

So called collective intelligence is formed, when everyone has access to the wiki and they can contribute to the content creation. Collective intelligence is the power of the people which will help to reduce tacit knowledge. This can be seen for example in the blogs and also from all over the web. When people can contribute they can use their power to get things done and to change things. At the moment most of the written information inside Department X is located to Share Points, Group Shares and Intranet. Wiki application would place all the essential information into one place, where it would be easy to find. Existing information could be linked to wiki from Share Points and Group Shares. So, the wiki application would help to find information easier and faster. The communication is always more efficient when all the information can be found from one place. It will also save some time and effort, when the in-

formation can be found easier. This will enable the employees to have more time to do essential tasks rather than seek the information from several databases.

When the information is easily available, it is also most likely to be used. This, on the other hand, will increase learning. As Company X is an IT company, the technologies and systems change fast. This has an influence on the employees, who continuously need to adopt the new information. When the updated information is easily available, it is also easier to adopt. By using wiki application effectively, a company can also avoid the loss of essential information and can benefit from tacit knowledge more efficiently. This can be achieved, when people answer questions made by others.

Nowadays it is more vital for companies to move towards green office thinking, where the office should be as ecological as possible. This means changing the paper cups to ceramic cups and reducing printing as much as possible and so on. When using electrical sources, there is no need to use paper. This will save nature as the use of paper will be deducted.

Young people are usually the most technology orientated and they are keen to use the newest applications, especially those, which are the so called trend applications. As the social media has become very popular among young people, it will also encourage them to join to the company and to develop the wiki application even more. (Ojala & Pöysti 2005, 17-19)

People are more motivated to use wiki when everyone is able to participate to the information storing and spreading. This will help the persons to develop the processes to be more effective and smoother. All the information can be easily modified by everyone, which eases the idea and process development. The process descriptions will be added to the wiki as well as the questions and answers. As everyone has access to the process descriptions and they are easily found inside the wiki, it is easier to develop the processes and make some suggestions, how to make the processes more efficient. So, wiki can create better environment for the process development but it does not cause project development without active users. The key factor for an effective wiki is active users, who create the content and modify it.

Outdated information can be easily formed in the wiki if the group of contributors is too small. If there are not enough active users, there will not be critical amount of persons to control the content. This can be avoided by motivating the persons to contribute. Outdated information can cause misunderstanding and incorrect actions in the Company X, which is why it is essential to understand the importance of content creation and updating.

Even though the text has a writer, the company owns all the information in wiki. This is inevitable as all the information in the wiki is based on company and customer specific informa-

tion. All the authors are inside the particular department and they have signed the confidentiality agreement, which avoids security risks and information leaks. In other words the wiki is no more security risk than the other existing SharePoints in Company X. Of course there is always a threat that there might be information leaks despite the confidentiality agreements. For example when persons leave Company X, they might take the confidential information to competitors. However this is something that Company X can not be sure of even though they require confidentiality agreements from all of their employees.

The outdated information and technology can be seen as a risk for wiki. To avoid the outdated technology, the wiki application should have an owner. This owner would act as a moderator to make sure the content is updated and to make necessary changes if the application has been outdated. The active community in the IT company can also help to keep the application updated. There should also be a technical supporting person for the application who would do possible updates from the technical point of view. This would ensure that the application would always be updated to correspond to the newest technical requirements and to the user's needs.

It is important to encourage people to participate in the content creation. If users do not contribute, there will not be information in the wiki. The lack of contributors can be seen as a major threat for the wiki because the lack of contributors will mean that it is not useful for the company to implement wiki. Due to this the motivation factors need to be investigated carefully before the wiki is published. This subject is being handled in the next chapter.

2.3.4 Contribution and motivation

There are several factors, which can motivate people. To be able to participate in a social media is a motivation factor itself, which drives people to add text to wiki. Also the reputation as a good co-worker, who wants to help others by spreading the information with others is motivating. The wiki can also be seen as a tool to get noticed by others. One strong motivation for the users is setting them an example, which is why all managers need be committed to the wiki project to increase the creditability of the project. (Nielsen 2006.)

The managers should also be highly involved in the communication. When the release of the wiki is announced by the managers, it will be most likely been taken seriously. The effect of the declarer is significant in the communication. One possibility to allow people to participate is to add questions to the wiki to which people can write their answers and tips. The idea of being useful is also motivating.

There is a bigger chance to get the right answer to the problem by acting individually but collectively. This is seen especially in the wiki where the contributors add their opinions individually building up a common understanding with the others collectively. The graphical appearance and the user friendliness will encourage people to participate. This is also, why the design must be planned carefully. When the wiki application is released it should be communicated to the audience effectively. It could be communicated for example in the company's internal newsletter. The announcement of the wiki's existence should also be added to the Share Points home page in order to make it more visible. (Nielsen 2006)

Monetary benefits can motivate people to participate. These can be monetary bonuses given according to the user's activity. For example if the person has written 10 articles in a month he or she would get a defined bonus. The bonus system could be integrated into the existing annual bonus arrangement. Automated notification email, which recommends person to update his or hers document, can be sent after decided time after the text creation. These notifications could remind the document creator to check, if the content is still valid. The moderator could also act as the content reviewer to make sure that the content remains updated. (Nielsen 2006)

There is a lot of technical information inside the team. The technical team leaders could be responsible for the documents relating to their technical team. They could also be responsible for creating new documents to the wiki. All the technical teams should have a contact person, from whom others could ask the issues to be added to the wiki. It is also important to have the name of the editor always under the text, which enables the moderator and other users to track the texts and ask the writer to edit the texts if needed. This way misuse of the wiki can be avoided. When the texts are not anonymous, people usually take more responsibility over their texts.

2.4 Social media project

Leenamaija Ojala and Kaija Pöysti have defined the essential steps in a wiki project. According to them there are five steps in a wiki application implementation inside companies:

1. To check the prerequisite fulfilment
2. Implementation plan
3. Implementation
4. Working in the social media environment
5. Result measurement and evaluation

(Ojala & Pöysti 2008, 25)

This research will investigate the first three steps. After the research, it will be decided if wiki application is suitable for the Department X. In case the answer is positive, the last two steps will be done inside the Department X.

The first step is to get answers to following questions before the wiki application is even considered in the company:

- What is the problem to which wiki application can be the answer?
- Is the company's culture ready for a wiki application?
- Can the critical level of participation be achieved?

(Ojala & Pöysti 2008, 25)

The implementation inside the company can be started according to Ojala and Pöysti if the answers to the above mentioned questions are adequate and if there is a real need for the social media.

The second step according to Ojala and Pöysti is to do an implementation plan for the wiki application. The plan needs to include: project, goals, indicators, tools and content definition as well as the pilot planning and execution and information security planning. (Ojala & Pöysti 2008, 25) All these issues will be handled in the implementation plan at the end of this research.

The third step is implementation. The roles and responsibilities need to be planned before the implementation. This is done to avoid a situation, where everyone uses the tool as they please, which would only cause chaos. Communication and education include the training material preparation and communication schedule. Directions and rules must be available for all of the users so that everyone knows how the wiki needs to be used, what is not allowed and what is expected from the users. Supporting staff is important in order to keep the tool easy to use. The users might not know how to use the tool despite good training and tutoring. In these situations they can contact the supporting staff. Before wiki is implemented the prerequisites need to be confirmed one more time. This is because the situation can be changed since the first time, when the wiki project was planned. (Ojala & Pöysti 2008, 25)

The fourth stage includes the leading of the wiki application's use. This includes resourcing and organizing the produce of the information, leading the thinking, monitoring the application use, resolve the problems and inconsistencies, rewarding and motivating the people to be active. (Ojala & Pöysti 2008, 25)

2.4.1 Obstacles for change

- Attitudes
- Structural obstacles
- Information security risks
- Managerial problems
- Technical problems

If the attitudes inside the company are against changes and social media, it is very difficult to implement wiki application successfully in the company. This is why it is essential to provide proper communication before the implementation. The goal of the communication is to prepare the employees for the upcoming changes. (Ojala & Pöysti 2008, 87)

Sometimes the company's structure might also cause problems for use of the wiki. The most significant structural obstacles are hierarchical organization structure, authoritarian management and introverted culture. The new tools will not be well used if the company does not appreciate people's ideas and suggestions, encourage interaction and collaboration and build an open culture. Another structural issue is rewarding. People have a tendency to do things for which they are rewarded. The rewards don't necessarily have to be monetary; the specialists appreciate their community's and colleagues' feedback. (Ojala & Pöysti 2008, 88)

Information security is on the one hand an attitudinal and on the other a realistic obstacle. Even though the social media tools are seen as worthwhile and interesting, they are usually considered as information security risks. However there is a big difference between the company's internal social media and the company's external social media. The company's internal social media is inside the company's firewall and is as safe as the company's other applications. (Ojala & Pöysti 2008, 88-89)

The company's management team should be committed to the social media project. They should give clear instructions, when the application has been decided to be implemented. The manager should define the need and resources well in advance so that there wouldn't be any hesitation in the implementation phase, lead by the project manager. After the implementation, it is important that the wiki has someone to control and maintain it. This task can be given to the communication team if it suits their current tasks and responsibilities. (Ojala & Pöysti 2008, 89-91)

Technical problems can also be obstacle for the change. The data communications connections should be adequate for the wiki to function. If the connection is too slow the wiki becomes difficult to use, which has a major effect to the users' motivation. Another technical obstacle can be that the tool does not communicate with the company's other tools. If the tool is integrated with the other tools, it will be easier to adopt and to use. The third techni-

cal problem can be in the tool itself. Usually the social media tools are not ready when established as they are continuously developed and changed. This is one thing that must be taken into consideration, when choosing the social media tool. (Otala & Pöysti 2008, 91-92)

2.5 Hypothesis

It is expected that the wiki application is a good communication channel for Department X due to user friendliness and ease of the information search. The wiki will replace partially emails, littoral documents and project reporting in Department X as stated by Otala and Pöysti. This will most likely ease the communication and deduct the time spent on information search. The Company X's branch will also support the use of wiki. IT Companies usually adopt the new technologies and methods better than other companies because their employees are already familiar with rapid changes and IT technology. As stated by Otala and Pöysti the age of the company's employees will also play a significant role in the adaptation of the new methods. As the employees in the team are quite young, commonly between the ages of 30-40, they attend to adopt the new tools and processes faster and better than older people.

The team's wiki application needs to have restricted access because of the confidentiality agreements with the Customer X. However, the access restriction is not an obstacle for the wiki as the user group contains approximately 1000 persons. So, the critical amount of participators will be achieved in Department X. According to the hypothesis Company X's prerequisites are fulfilled and a further investigation can be made.

When thinking about the Department X's culture it can be seen as a good base for the social media. As there is an open environment, which encourages idea development and sharing, it is expected that the wiki can be implemented inside Department X.

2.6 Methodology

This research is based on a case study. It has started from the Department X's need to develop the internal communication. So, the approach is from the communicational point of view. The goal is to develop the communication in order to better the company's functions. This research does not give answers to the entire knowledge management but tries to enter to the problematic of the wiki application. The knowledge management as whole is a wide concept and it is partially well organized in Department X, which is why the Department X wanted to investigate only the possibilities to implement wiki application in the company.

2.6.1 Data Collection

There are two approaches to gather information, which are secondary data collection and primary data collection. Primary data is collected through observations, interviews and questionnaires. Secondary data is collected by investing the existing documents for example earlier researches and organization's record. (Kumar 2005, 118-142)

The most appropriate data collection methods for this thesis are documentary analysis and interviews. These two methodologies were chosen since they were most suitable to investigate the research problem. To get the proper answers to the research problem, Company X's personnel needed to be interviewed to get an overall picture of the current situation and to investigate the possibilities of the wiki application and the attitudes towards it.

Social media is much investigated subject. It is important subject so much research especially regarding blogs has been done. However, there is just a small amount of research concerning the wiki application. Ojala and Pöysti have investigated wiki application inside companies in their book *Wiki Mania*, which has also been used as a reference for this thesis.

Personal records are for example all books excluding all government or semi-government publications. (Kumar 2005, 141) As social media is executed in the internet, many of the resources and examples are found on the internet. In this research I have used literary material found from books and internet to provide references and background for the research. Company X's web pages have also been investigated to get the overall picture of the current situation and possibilities.

Mass media include reports in newspapers, magazines and so on. For this research I have read internet news papers and articles regarding the social media. Iltalehti wrote an article about doctors in America who use Wikipedia as a knowledge source, when doing medical evaluations. This is a clear statement, how people take the information found from Wikipedia as a definite truth. This is really an incorrect assumption as everybody can create content to the Wikipedia. It can not be taken as an ultimate truth as you can not be sure about the information source.

Interviews are made to investigate the people's opinion about the research issue. It is essential to create proper schedules to correspond to the research issue. Interviews are participatory research methods, which need the researcher to participate to the data collection by presenting the questions and by leading the conversation to the essential research issues. The main idea is that the researcher is in active interaction with the interviewee. An unstructured interview is qualitative research method. The interviews are recorded and transcribed for later review. (Grönfors 1982, 105-107) It is important for the researcher to remember that

qualitative research tries to enter to the in-depth accounts from people so that they can select their desired aspects. (Barbour 2008, 115)

Pro-forms are usually used for collecting basic data on interviewee's demographic characteristics. In most cases this information is needed in order to evaluate the interviewee's answers. However, in this research only person's role, sex, age and years in the Company X are essential information in order to interpret the answers correctly therefore no pro-forms are used in this research.

Interview schedule may include only headings or it can have carefully worded questions. The questions should not be too specific in order to allow the interviewee to respond openly to the subject. The easiest question should come first as the atmosphere is usually tight at the beginning of the interview. An opening question should be something, to which the interviewee can easily respond without feeling threatened.

The interviewer should not ask too many leading questions and make assumptions, when executing interviews. On the other hand, as we all are human beings, we might sometimes get carried away by the topic and start stating our own opinions, which might cause reliability issues with the research. (Barbour 2008, 118)

Interviews should be active interaction between the interviewer and interviewee. In semi-structured interviews, the schedule is loose and leaves the interviewer possibilities for variation. (Barbour 2008, 119-120) In this case research, I will use semi-structured interview to investigate the employee's opinion about the wiki application.

Advantages

- Interviews are good for complex situations for the reason that the interviewer can prepare the interviewee before asking sensitive question.
- Interviews are useful for collecting in-depth information as the interviewer can lead the conversation.
- In interview situations the information can also be supplemented from the responses.
- Interview situations allow the interviewer to explain the question to the interviewee when needed.
- Interview as a method of data collection, can be used for all sections of the population for example to children and illiterate people.

Disadvantages

- Interviewing is expensive and time-consuming, since the interviews are usually made face to face and only one person is interviewed at the time.

- The data quality is dependent on the quality of the interaction and of the interviewer.
- The interviewer may introduce his or hers bias.
- The interviewer may be biased.

2.6.2 Data Analysis -SWOT

SWOT stands for strength, weakness, opportunities and threats. It evaluates these four aspects in the research issue. SWOT is widely used in all kind of research and is easily modified to fit many purposes. It is hard to do a good SWOT analysis as all the aspects need to be investigated and then analysed in order to make proper action plan. Strengths and weaknesses describe the company's internal situation and the opportunities and threats describe the environment; issues affected from the outside of the company. (Kamensky 2004, 191) I have chosen SWOT to analyse the team's possibilities to adopt wiki application as a communication channel because of the variability of this method.

As mentioned above, a SWOT analysis can be used for many kinds of purposes also the target of the analysis can vary a lot. In this research, the target is to investigate the wiki application inside Company X's department. It is essential to define, what is being evaluated so that the results are reliable. (Lindroos & Lohivesi 2004, 217)

A SWOT analysis can be done by an individual, as group work or by individual and group work. Usually after individual work the results are being discussed in a group to create common understanding. Typically the results show that the same issues can be strengths, weakness, opportunities and threats. This is because the evaluation is always subjective and the SWOT analysis has been made to describe the present and the future. This might cause the outcome to be complicated. A solution for this is to make two corresponding SWOT analysis; one that describes the current and one that explains the future. Afterwards these two charts can be analysed together. (Lindroos & Lohivesi 2004, 217) Conclusions how the strengths can be used, how the weakness can be turned into strengths, how future opportunities can be used in advantage and how the threats are avoided can be done based on the SWOT results. As a result for the analysis an overall plan is made, how to act in the situations. (Lindroos & Lohivesi 2004, 218)

2.7 Validity and Reliability

There are two perspectives of validity:

1. Is the research investigation providing answers to the research questions for which it was undertaken?

2. If so, is it providing these answers using appropriate methods and procedures?
(Kumar 2005, 153)

Face validity defines if there is a direct link between the question and the objective. Content validity instead assesses the items of an instrument. (Kumar 2005, 154-155) The instrument used in this research is the interview. It was chosen for the reason that there was a need to investigate the personnel's opinions about the wiki application. The questions were placed to measure the opinions about the usefulness and functionality of the wiki. Also the problematic matters were discussed and the questions were aligned to the objective.

Wording of questions, physical setting, respondent's mood, nature of the interaction and regression effect on an instrument can effect to the reliability of the interview (Kumar 2005, 157) Wording of the questions can also effect to the reliability, if the interviewees interpret the questions differently. In this case the interviews were made face to face, so all the questions were carefully explained to the interviewee. The interviewee had possibility to ask questions from the interviewer during the interview so that all the questions were understood correctly.

The physical settings were same in all interviews. The interviews were recorded to a tape recorder, which might have caused some tension at the beginning of the session. However, being aware of this fact, the first questions were made to loosen the atmosphere and to ease the tension as the respondent's mood during the interview can also affect the reliability. All the interviews were carefully planned beforehand and enough time was booked for each interview. The interviewees were informed beforehand of the upcoming interview so that they all could orientate to the session.

The nature of the interactions was similar in all interview situations. The interviews were held at Company X to create similar settings. The interaction between the interviewer and the interviewee was mutual in all interviews and the interaction was professional and friendly. The regression of an instrument is when the interviewee can answer to an issue at the first time very strongly and at the second time the answer can vary lot. All the interviewees had time to explain their point of view and change it, if they felt it was necessary, because the interviews were made face to face. These pre meditated actions made all the interviews to be considered comparable and dependable. Looking at all the mentioned things as a whole, it can be stated that the interviews were valid and reliable.

3 Research findings

In this chapter I will enter to the second research question: What are the strengths, weaknesses, opportunities and threats (SWOT) of the team regarding the wiki application? It will investigate first Company X's personnel opinion about the wiki application and then use it together with the researchers own views in order to build the SWOT analysis.

The case study has been made for an international IT company, which is referred as Company X. Company X's Department X is the target and specially defined customer X. The internal communication has not been good in this defined department as the information is spread to many different places: Share Points, Group Shares and Intranet. Another issue is that the technologies change often, so the information needs to be updated frequently. At the moment many things, for example technology details, have not been stored anywhere. This is also why there is a large amount of tacit knowledge inside Department X and why several questions are placed to the technical specialists several times. This causes the specialists to repeat themselves often, which is an ineffective and time consuming working method.

The team inside Department X contains approximately 1000 people. Due to the vast audience, the well organized internal communication can cause significant increase in the efficiency and cost reduction. The target of this case study is to investigate if Department X's internal communication can be improved through wiki application.

3.1 Interviews

Company X's personnel, who are working in Department X's key roles, were interviewed to get an overall picture of the communication situation and to investigate their opinion about the wiki application. The persons who were interviewed were:

1. Project manager working in customer related projects. She is 29 years old and has worked 3 years in the Company X.
2. Person is in a customer facing role. He is 35 years old and has worked 3 years in the Company X.
3. The account team member. He is 53 years old and has worked 11 years in the Company X.
4. The technical specialist. He is 33 years old and has worked 3 years in the Company X.

As most of the Department X's employees are males, also most of the interviewees were males. The age structure in Department X is quite young and as the Company X is an IT company it is normal that most of the employees are 30-40 years old. The technical specialist didn't want the interview to be recorded so only notes were taken from his interview.

3.1.1 Content of wiki

According to the project manager wiki application should include mainly frequently asked questions concerning the technical and operational issues. This is because it is sometimes hard to know, whom to ask for the help or the information. Also some simple questions and answers regarding the projects should be added there to avoid going through large amounts of instructions and process descriptions in order to find an answer to the question. As Company X is a technology company, many different kinds of technical information is often needed in everybody's daily work. Especially, the project manager stated that the technical instructions would help a lot, as there are many kinds of information needed in the projects. Another item that was brought up is that the technical persons don't always know how to communicate properly, especially to the person, who does not know about the technical issue in question. The project manager would also want to add the abbreviations and their meanings to the wiki as there are numerous abbreviations in Company X. In general, her opinion was that most of the information and documentation is not stored anywhere at the moment. According to the project manager, it would be a good idea to have such a person creating the wiki, who doesn't know anything about the issues inserted in wiki, because then the information would be written in such a way that everybody would understand it. It would also be important that the most basic issues would be added to wiki, which the new employees could use as well as part of their induction process.

The person working in the customer facing role stated that detailed information, which is needed every day, but which is not stored anywhere, is hard to find. In his opinion the big process descriptions are well documented and stored but the details can not be found anywhere. These are for instance some tool related issues; how to access the tool, how to get the access, who grants the access, how the approval process goes, who needs to be contacted and so on. This person also stated that it is hard to say, how the information should be categorized in wiki. At the moment there should be definitely technical information and general information as well as information, which the new employees could easily use to get a hold of the new role and tasks.

In the account team member's opinion, information included in the contract made with Customer X and especially the interpretations of the contract's detailed information are hard to find at the moment. The working instructions that are based to the contract, is particularly hard to find. As said by the account team member, the problem is that there are lots of information and it is unstructured. He stated that the ideal would be that there would be a directory from where all the information could be easily found. The existing documents should be linked to the wiki as well. The information should be in the same place, but it is not possible to organize, because there are different levels of information, which can not be shared

with everybody. The account team member also noted that the wiki's language needs to be English so that the wiki would serve all the users in the department. The account team member also pointed out that the wiki needs to be only for company's internal use. Customer shared wiki wouldn't work due to the different views and ways to interpret things. This would most likely cause misunderstanding and problems.

3.1.2 Contribution

There would be an initial work group to start to the creating the content. This group would add topics and questions to the tool in order to motivate people to generate the substance. The project manager suggested a competition as a motivation method. There would be a reward to the individuals, who have contributed the most to the wiki during a defined period. This method could be used right after the release of the wiki, yet it should be done in a way that the persons wouldn't use most of their working hours to create the content to wiki.

The project manager didn't believe that the technical persons would contribute spontaneously. One reason for the persons not to share the information can be that they want to be the only ones to know it so that they would be considered as irreplaceable persons. However, the project manager did believe that the persons would participate to the content creation, if it would be in the person's interests. In her opinion, technical persons often criticize that people asks the same questions over and over again. Through wiki they could add the instructions to wiki and advise people to look at the instructions there, which would also provide them more time to do their actual job and therefore could have an influence on decreasing stress levels in general.

An account team member stated that people would participate to the content creation, if the tool would be easy to use. According to him one way of getting people to participate more is to make the information available so that it would be easy to add to wiki and easy to find. This means that a good structure and search quality attracts people to use wiki. The account team member gave an example, how easy the substance creation should be: if someone asks something through an email, the receiver could answer the question and add the question and the answer easily to the wiki. Nevertheless, according to the account team member, the threat is that people can be lazy and not participate to the content creation. On the other hand, if the initial content is already created at the beginning, it will encourage people to participate.

The person in the customer facing role believed that just a few would participate to the process of the content creation willingly. So according to him there should be something to encourage people to participate. He said that wiki is considered as voluntary work, which

makes it even more important to persuade people to participate. The person in the customer facing role stated that only those persons, who have time, will write texts to the wiki. He also believed that money could be good way to motivate people.

3.1.3 Technical Specialist's point of view

The technical specialist said that the information he uses is deep technical and it is so secret that it can not be shared even inside Department X or inside Account X. According to him, this is such information, which can not be added to the wiki. As a result, he suggested that the social media tool would be a tool, which would contain all the aspects of knowledge management. This could be for example Documentum, which is a document repository and social media tool. It combines all the aspects of knowledge management and archives the old files as well as communicates with outlook.

According to the technical specialist the wiki application could be an answer to the information search issue, though it would not be the answer for all of the challenges in the knowledge management. This should be considered carefully before implementing wiki. To work properly, wiki would need to have many sub-wikis, one for each technology for highly secure and confidential information.

3.1.4 Usefulness of wiki

All the interviewees believed that the wiki application would make the information search easier. According to the project manager wiki would help to find the technical information, if the technical persons would answer to the technical questions in wiki. She believed that it would work, if there are questions to which the managers would oblige their team members to answer. According to the project manager it would be of crucial importance that the technical specialists would insert the information in a way that everybody would understand. She stated that the wiki would be useful, because then all the information would be in one place. Wiki would also be good, because it would not be necessary to go through big documents and the existing documents could be linked to wiki. Currently the search function does not work well in SharePoints for the reason that the information is spread to many SharePoints, which the project manager believed that wiki could solve. It would be good especially for persons in customer interaction role or for the project managers who don't have the own technical speciality and who need to understand something from every technology.

The person in the customer facing role stated that the wiki would be excellent communication channel, but it would need a great amount of work. It should be planned, how the existing systems could be integrated to wiki, what part of the communication would the wiki re-

place and what communication systems and methods would be working beside wiki. He stated that it could be planned in such a way that the wiki would be the primary place, where the users would search the information. It should have links to the documents so that they could also be found through wiki. Then the SharePoints would act as a document storing place and the documents could be linked to the wiki.

According to the account team member wiki is not always the right source to find for example contract information. It can still help to find out whom to contact and what is the main idea behind the issue at hand. Everyone faces every day issues, where they need to search information for example matters related to best practises and processes. When a person has a question, he starts to think where the information could be found or who to contact. The first thing, if there would be wiki, would be to go to the wiki and check if there's anything about the issue already written there. In other words, the wiki could be used as a primary place to search for all kinds of information.

All the interviewees stated that the wiki application should be implemented. They all believe that wiki could provide help to issues of the knowledge management. As the current situation is not ideal, the wiki application could be implemented despite the weaknesses and threats. The main thing is that when the wiki is well planned, it can work well.

3.2 SWOT

This SWOT analysis is used in this thesis to investigate the team's strengths, weaknesses, opportunities and threats regarding the wiki application.

<p style="text-align: center;">Strengths</p> <ul style="list-style-type: none"> + resources and technology are already found inside the company + global team + open and technology oriented culture + capabilities of the individuals to learn new tool 	<p style="text-align: center;">Weaknesses</p> <ul style="list-style-type: none"> - lack in resources - global team - attitudes - unwillingness to changes
<p style="text-align: center;">Opportunities</p> <ul style="list-style-type: none"> + benefits of the outsourced services + wiki development by Microsoft + new employee brings new ideas to the wiki 	<p style="text-align: center;">Threats</p> <ul style="list-style-type: none"> - outsourced personnel - overloaded resources

Table: 2 SWOT

3.2.1 Strengths

The technology to build wiki and to maintain it is already available and the coders can be found inside the company, because Company X is an IT company. This will ease the implementation phase. It will also reduce the costs to implement the application and maintain it, so it can be considered as a Department X's strength.

Department X has a global team and it includes approximately 1000 employees. So the user group for the wiki is quite large. This is good so that there will be most likely many contributors even though not all of the persons participate to the content creation. So, the critical amount of contributors will be most likely achieved.

Company X's culture is open-minded. This can be partially because IT companies are usually used to rapid and constant changes. The technologies change fast and Department X's personnel are already used to those changes and implementation of the new tools on a tight schedule. The individuals inside Department X are familiar with the changes and new tools, which will make the individuals capabilities to learn new tools better. They will most likely adopt the new tool and the working methods respectively quickly compared to some old organizations, which use the same tools and technologies and rarely change the working methods.

3.2.2 Weaknesses

As already stated before, Department X has a large global team. It can be also seen as a weakness, because when there are many people it is more difficult to manage them. There are many different cultures, opinions and attitudes and these all must be taken in to account, when planning the implementation of the wiki. For example the instructions how to use wiki, the education and the communication must be planned for global audience. If it's not considered, it might cause difficulties and misunderstandings.

The negative attitudes towards the wiki application can be seen as a Company X's weakness. However, according to the persons who were interviewed the wiki would be considered as a good communication channel. Despite this, there are usually people who don't like changes and might think that the wiki is a waste of time and impractical. To avoid these attitudes and assumptions proper communication and training should be placed. Even with these actions, people can still have negative attitude and as attitudes are usually deep, they can not be changed easily. Instead they need time and adaptation. Usually when people see that the new system works well, they start to use it and after some time they might change their attitude. It must still be considered when implementing wiki.

Unwilling to change can be seen as a threat. People might be afraid of new tools and working methods, which can affect their attitudes. These people like to keep the existing methods and tools without changing anything. However, as seen in the interviews the interviewees were all keen to know how wiki would function and they would like it to be implemented. This shows that people are open minded to change. Still, there might be some individuals who don't like the changes. These people need to be taken into consideration when making the implementation plan and the communication.

Lack of resources can be seen as the biggest weakness. This is because if people don't have time to do their jobs, they will definitely not have time to contribute to wiki. This needs to be taken into consideration when planning wiki and its implementation. Human resources need to be evaluated so that there are enough resources.

3.2.3 Opportunities

There are some outsourced services in the Department X. These outsourced resources can bring a new point of view to processes and to the wiki application. The outsourced persons have the same access rights to Company X's intranet as the other Company X's personnel. So, it will be easy grant them access to the wiki and use their knowledge for the content crea-

tion. When new employees are hired to Department X, they will bring new knowledge to the team. This new knowledge can also be seen as an opportunity for the wiki.

The wiki application will be founded on the Microsoft SharePoint 2007 software. This can be seen as an opportunity, if the Microsoft develops the SharePoint 2007 and adds new features to it. This can be seen as an opportunity for wiki in the future.

3.2.4 Threats

The outsourced staff can be seen as opportunity as stated before, but they can be seen as threats also. These people can feel outsiders who do not want to contribute to the Department X's wiki. There need to be good communication to these persons in order to make them participate in the content creation.

The pressure coming from the customer's requirements will cause an overload of the human resources. This can have a negative effect on the wiki, because when people are busy and the customer is pressuring them they will not contribute to the content creation.

4 Implementation Plan

This chapter will describe, what is needed for the implementation process. It includes descriptive preliminary implementation plan and implementation phase.

4.1 Preliminary implementation plan

The implementation plan will focus on, what is needed for the implementation. It will define the project, its goals and indicators as well as the resources, time frame, tools, content and pilot.

4.1.1 Project definition, goals and indicators

Wiki is used in the Company X for Department X and for Customer X. This definition is made due to information security issues. Customer X has defined that all persons, who have access to the information related to it and therefore need to sign customer specific confidentiality agreements. This is the reason why wiki will be accessible only to a carefully defined group of people who are working inside Company X for Customer X.

The goal of this project is to ease the information flow inside the Department X. The improved information flow is expected to diminish the amount of the tacit knowledge and to

improve the process development. The main goal is to achieve cost efficiency by reducing the working hours spent on the information search and to deliver better service for the Customer X.

Indicators used to measure the benefits of the wiki application are:

- user activity
- content amount
- amount of the users
- interviews - people's opinion

The achievements of the goals will be measured on monthly bases by the project manager, who is leading the implementation of the wiki application.

4.1.2 Resources and time frame

The wiki project will need following human resources:

- Project manager to lead the project
- Application specialist to build the application
- Communication specialist/manager to communicate the existence of this new application
- Initial work group, 4-6 persons, to write concepts into the application. The concept can be short instructions, questions, tips and information.
- Supporting person, who will answer to the end users questions

No big investments are needed, as all the needed human resources can already be found inside the company. SharePoint 2007 can be used as the base for wiki application.

The piloting will take approximately a month after which the results will be evaluated and the possible changes will be made. The implementation will take a few months depending on the piloting success. The functionality and user activity will be tested and evaluated every month after the implementation to obtain improvement ideas.

4.1.3 Tools

The wiki application will be built on the SharePoint 2007 programme, which is already used in Company X. This will also ease the integration to the other tools for example to Share Points. Share Point's would be working on the same kind of bases, which means that the applications would easily communicate with each other.

Another supporting tool that is needed is the email to receive the notifications from wiki. This is particularly needed for the moderator who needs to keep up to date with what's happening in wiki.

4.1.4 Content definition and description

Official documents will be left to Company X's intranet and customer specific Share Points and only linked to wiki. This way it is possible to ensure that the official information is kept reliable. Other documents will be placed into wiki. This kind of information is for instance essential tips and information and project documents.

The initial content should include substance to which end users can easily add information so that they know what kind of information is expected from them. The initial content could include for example a short explanation of the project. Then the project team members could add specific information under the topic.

Wiki would be accessible only for the persons working for the Customer X. All the users have signed the Customer X's and the Company X's Non Disclosure Agreement, which means that they are legally combined to follow the confidentiality agreement. The content to the wiki can not be written anonymously to ensure that the content creator is responsible for his or her own text. As the wiki will be used only inside Company X and for the Customer X, the security risks are same as with the SharePoints. The wiki application will be used on the same technical base as the SharePoints. The access rights to the wiki will be inherited from the SharePoint to ensure that all the persons, who have access to the wiki, have signed needed confidentiality agreements.

4.1.5 Pilot planning and execution

A pilot wiki includes basic information and initial content. It will work as a base for the further wiki application for the Department X. There will be nominated a team including 3-5 persons to form a test group, who will test the functionality of the wiki for a month. After the piloting period all the faults will be investigated and corrected. The things which will be asked from the pilot group will concern the usage, guidelines and content.

The execution will be lead by the project manager. The test group will test how user friendly the wiki is. For instance, is there anything the test group would like to change (layout, functionality, content and so on)? After the piloting period the results will be carefully investigated in order to do the needed changes to the piloting version and to the instructions.

4.2 Implementation phase - things to be considered

The implementation phase will describe what is needed for the implementation and what needs to be considered when implementing the wiki.

4.2.1 Roles and responsibilities

There will be four user roles inside the wiki: administrator, moderator, contributor and reader. The Administrator will be responsible for the entire tool and the moderator will be liable for the specific category for example from the specific tower. Contributors would be those people who write texts for wiki actively and readers those who only use the wiki to get the information but who does not contribute to the content creation.

The roles regarding the implementation project could be defined as follows

- The project manager is responsible for the implementation. He or she will be leading the project and see that everything goes as planned.
- Communication and the Department X's assistant will support the project manager in the implementation. They will also be responsible for the communications and education.
- The test group will start the content creation and act as the active users. They will add questions and texts to the wiki.
- Application specialist will be defined to support the wiki on the technical point of view.
- The team leaders are responsible for updating the information related to their teams.

4.2.2 Communication and education

The existence of wiki will be communicated carefully to the user group well in advance of the implementation. The meaning and functionality of the wiki will be carefully explained to the audience. The communication will be done using Department X's internal news letter. The information will be also added to the Share Points and spread through email notifications. It is important to encourage people to be bold. Wikis develop faster when people fix problems, correct grammar, add facts and so on. Some persons might hesitate to update other people's contributions, but that's what wikis are all about. Content that people do not want edited does not belong in a wiki.

The training sessions will be held before wiki is published to ensure that everyone knows what is expected from them. Department X's assistant will plan the training material together with the communications personnel. There will be test version of wiki, where the users can test

how the application works. This testing field will work as an education place for the users to safely test the functionality and possibilities of the wiki application. In Microsoft web pages there is already a test programme where the user can create SharePoint or wiki pages and add and edit documents. This can be used as practise place at the beginning.

4.2.3 Code of Conduct, guidelines and supporting staff

The wiki's guidelines should include following information

- How to make social media and virtual platform initiative?
- Planning preparation
- Establishment of the virtual workspace
- Implementation of the virtual workspace
- Language -multiple languages versus one language
- Management, exhortation and rewarding
- Evaluation of the workspace usefulness

The code of conduct should be based on individual guidance. The code of conduct should include the following instructions:

- Why social media is used in Department X and what is the purpose of virtual workspace?
- Who can participate to the workspaces and use them? What kind of roles does the workspace have?
- What are the responsibilities and authority of the different roles?
- What behaviour is expected in the virtual workspace and what behaviour is not allowed?

The new application should always have a supporting person. This person would be responsible for the new employee orientation and for the end user guidance. The end users could ask all the questions related to the wiki application from the supporting person. As the Department X's assistant is already responsible for the SharePoint content and acts as the support person for them it is natural that he or she will be the support person for the wiki application as well.

4.2.4 Confirming the prerequisites

The technical requirements need to be checked from the technical supporting person. The things to be checked are:

- Is there adequate connection to the web? Is there enough space in the servers?
- Can the wiki be connected to the Department X's Share Points and Intranet and so on?

It is important to ensure that the Company X's culture is good for the wiki application. The culture should be open, respect the individual, include open idea creation and experiments, accept imperfections and incompleteness, respect the multicultural environment and include good management culture. The Company X's culture includes the issues mentioned above and therefore it can be seen as good place to implement the wiki. To work properly, it is good to add the openness inside the company. The company's culture can never be too open for the wiki application.

5 Conclusions

The knowledge management should be planned as a one concept to ensure good communication and document handling. Wiki application does not include all the aspects of knowledge management. This research focuses only on document creation and sharing through wiki application. It will not take opinion to the document archiving and vast document handling and management. Still, if the wider knowledge management system is decided to be used in Company X, then this research can be used from the social media and document creation point of view.

According to the SWOT analysis, Department X should implement wiki application because it fulfils all the requirements. There is an obvious need for the wiki as all the information is at the moment spread to different Share Points and Group Shares and the interviewees stated it is difficult to search the information. As the prerequisites for the wiki applications exist, the implementation plan can be made.

The reasons to implement wiki are its benefits for the Company X's business. When the information is easily available it is most likely to be used. When the wiki application is also user friendly the users will most likely participate to the content creation. This, on the other hand, reduces the amount of the tacit knowledge. In other words, the wiki application can help the Company X to keep the essential information inside the company and to use the information to serve the Customer X.

Before implementing the wiki application it should be decided if the content is created from the beginning or if the old documents are linked to the wiki. The both ways of doing have their pros and cons. If all of the content is created from the beginning, it will ensure that the information is up to date and current. However, as there is lots of information to be added, it would take much time and effort from all of the employees to add the texts to the wiki. If the content is linked from the existing sources, then the content creation would be much faster and easier process. On the other hand there might be a risk that the information on the

SharePoints is outdated, still the information in the SharePoints is quite frequently updated, so as a researcher I don't see this as a major weakness.

The benefits of the wiki application to the Company X's business can be measured by the wiki's user activity and by the efficiency of the employees. The measurement of the benefits is somewhat difficult to determine as the issues to be measured are complicated. The benefits for the service delivery point of view can be observed during the monthly customer satisfaction surveys. As in all the companies, the Company X's goal is to improve the customer satisfaction through the good service delivery, in which Wiki can help. Another way of measuring the wiki is to do surveys among the users inside the Department X. This way it could be measured if the wiki is useful for the users and if there would be some development proposals. During these interviews it might come out that the wiki is not functioning the way it was planned to. There might be some unexpected faults in the wiki which need to be corrected, for example the structure doesn't entirely match to the need. In this case it can be investigated what is causing the problems and then conduct the needed changes. Also if the customer surveys indicate that the service levels have dropped down, it should be investigated, what is causing the problems and do the needed changes.

One of the problematic of the wiki application is that the user group can not be defined by the categories. This means that if the wiki has different user groups with different access rights requirements then there must be several wiki's to be created. This might cause the information to fragment to various Share Points and wikis. On the other hand the meaning of this Department X's wiki is not to be document repository but to be the place to invent and add general tips and information. As the Share Points will remain as the main document repository, the wiki will work as search engine and idea creation place. This defined purpose and use will decrease the information fragmentation.

5.1 Questions for further investigation

During the research questions for further research were raised:

- Who will be nominated to the project?
- How much will these persons be involved in this project? How much each individual can be involved to the project?
- What is needed for the knowledge management except the social media aspect?
- Could the overall knowledge management system for example documentum be implemented to the Company X?

The thesis has been made to a company which wished to stay anonymous and therefore it can not be identified, who could be nominated to the project team. Before implementing the wiki

it should be carefully considered, who will participate to the implementation and how much. Depending on the person's current liabilities, capabilities and possibilities it will be decided how much he or she will be involved.

The knowledge management should also be investigated as a whole before the wiki is implemented. The Company X's current knowledge management systems and the Department X's systems need to be investigated. This is because the wiki will be part of the knowledge management and if the knowledge management strategies and tools change, it needs to be considered what kind of effect they have to the wiki. For example, if the SharePoint systems change, then the wiki's platform needs to be changed also. It needs to be investigated what kind of knowledge management tools could be implemented there, is there any restrictions from the corporate to implement the tools etc because the Company X is an international and large company.

References

- Aula, P.; Matikainen, J. & Villi, M. 2006. Verkkoviestintäkirja. Helsinki: Yliopistopaino.
- Barbour, R. 2008. Introducing qualitative research. A student guide to the craft of doing qualitative research. London: SAGE Publications.
- Barnes, S. 2003. Computer-Mediated Communication. Human-to-Human Communication Across the Internet. Boston: A&B.
- Ghuri, P. & Grønhaug, K. 2005. Research Methods in Business Studies. A practical guide. England: FT Prentice Hall.
- Grönfors, M. 1982. Kvalitatiiviset kenttätutkimusmenetelmät. Juva: WSOY.
- Kamensky, M. 2004. Strateginen johtaminen. Helsinki: Talentum.
- Kumar, R. 2005. Research methodology. A step-by-step guide for beginners. London: SAGE Publications.
- Lindroos, J-E. & Lohivesi, K. 2004. Onnistu Strategiassa. Helsinki: WSOYpro.
- Mäkinen, O. 2006. Tutkimusetiikan ABC. Helsinki: Tammi.
- Ojala, L., Pöysti, K. 2008. Wikimaniaa yrityksiin. Yritys 2.0 tuottamaan. Helsinki: WSOYpro.
- Pihlaja, J. 2001. Tutkielmaa tekemään. Vammala: Kirjapaino Oy.
- Richardson, W. 2006. Blogs, Wikis, Podcasts and other powerful web tools for classrooms. Australia: Hawker Brownlow education.
- Tirronen, M. 2008. Web 2.0. Verkon numerologia. Helsinki: BTJ.
- Valden, T. 2008. Wikipedian käyttäjän käsikirja. Tampere: Juvenes Print.
- Virtainlahti, S. 2009. Hiljaisen tietämyksen johtaminen. Helsinki: Talentum.

Electrical references

- Anderson, P. 2007. What is Web 2.0? Ideas, technologies and implications for education. JISC Technology and Standards Watch, February. Visited on 24.7.2009. <http://www.jisc.ac.uk/media/documents/techwatch/tsw0701b.pdf>
- Barr, T., Burns, A. & Sharp, D. 2005. Smart Internet 2010 Report. Smart Internet Technology CRC. Visited on 24.7.2009. <http://smartinternet.com.au/default.aspx?ArticleID=201>
- CSI Fan Wiki. Visited on 11.11.2009. <http://csi.wetpaint.com/>
- Iltalehti Visited on 29.7.2009. http://www.iltalehti.fi/terveys/2009073010007459_tr.shtml
- Kangas, P.; Toivonen, S. & Bäck A. (toim.) 2007. Googlen mainokset ja muita sosiaalisen median liiketoimintamalleja. VTT tiedotteita 2396. Visited on 27.7.2009. <http://www.vtt.fi/inf/pdf/tiedotteet/2007/T2369.pdf>
- Middleton, M. & Lee, J. 2007. Cultural Institutions and Web 2.0. Smart Internet Technology CRC. Visited on 27.7.2009. <http://smartinternet.com.au/default.aspx?ArticleID=201>

Nielsen, J. 2006. Participation Inequality: Encouraging More Users to Contribute. Visited on 27.7.2009. http://www.useit.com/alertbox/participation_inequality.html

O'Reilly, T. 2005. What Is Web 2.0. Design Patterns and Business Models for the Next Generation of Software. Visited on 29.7.2009.
<http://www.oreilly.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>

Wikipedia statistics. Visited on 11.11.2009. <http://en.wikipedia.org/wiki/Special:Statistics>

Other references

Interviews:

Project manager was interviewed on October 27, 2009 in Company X.

Person in the customer facing role was interviewed on October 28, 2009 in Company X.

Account team member was interviewed on November 2, 2009 in Company X.

Technical specialist was interviewed on November 2, 2009 in Company X.

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Interview schedule

- What kind of information is hard to find inside the company?
- What kind of information would you like to be added to the wiki?
 - Technical issues/guidelines
 - Common issues
 - Process description?
 - Something else?
- How would wiki application ease your daily work?
 - Would it make it easier to find some special information?
- Do you think the persons would participate to the content creation?
 - How could we motivate people?
- Would you consider Wiki application useful as company's' internal communication method? Why?
- Why wiki is good/bad?
- Anything else to consider?

Interviewing the project manager

Interviewer: What kind of information is hard to find inside the company?

Project manager: Almost everything, because the technical persons don't know always how to communicate properly especially to the person who does not know about the technical issue in question. It is hard to get clear information from them and then they don't necessarily like to document the information. In general, my opinion is that most of the information and documentation is missing from several issues, which might help the others.

Interviewer: So, probably in the projects this is seen as you need many kinds of information especially the technical information, right?

Project manager: Yes.

Interviewer: What kind of information would you like to be added to the wiki? Would it be the technical information, or?

Project manager: Yes, the technical information and frequently asked questions because it is sometimes hard to know who should you ask the help or the information. Also some simple questions and answers regarding the projects should be added there so that you don't need to go through some huge amount of paper, which can mainly include high level information which does not help you at all. Mainly, the information should be the kind of information that is usually asked from the technical persons. I think that is the information that most of the people would need. For example we are doing a list of frequently asked questions regarding the projects to the SharePoint so that people know what's going on.

Interviewer: How would wiki application ease your daily work?

Project manager: It would help to find the technical information, if the technical persons would answer to the technical questions in the wiki. I don't know if it would work if there would be questions and the Managers would obligate their team members to contribute to the content creation. Also in a way that everybody would understand the technical answers.

Interviewer: Do you think the persons would participate to the content creation?

Project manager: I don't believe that the technical persons would contribute spontaneously. I think that many of them don't do anything spontaneously. It should be in the person's objectives to contribute to the wiki content creation. So, it should be obligated not totally under free will. This wiki sounds good, especially for the customer facing persons or for the project managers who don't have the own technical speciality and who needs to understand something from every technology.

Interviewer: So, how could we motivate the persons to participate?

Project manager: At the beginning there could be some competition or some rewarding system to reward the persons who have contributed much. However, in that way that the persons wouldn't use most of their time to create the content to the wiki. I think that the technical persons often complain that 'oh, they are again asking the same questions and I need to spell it out.' Through wiki they could help their own position.

Interviewer: Would you consider wiki application useful as company's' internal communication method? Why?

Project manager: Yes, because then all the information could be in the one place. As the moment the information is spread to SharePoints where it is hard to find. Wiki would be good, because then it would not be necessary to go through big documents and the existing document could be linked to wiki. It would be easier to find documents through wiki because the search function does not work so well in SharePoints because the information is spread to many SharePoints.

Interviewer: Do you have anything else to comment on this subject?

Project manager: I wish that all the abbreviations and their meanings would be added to the wiki. It would be good that there would be a person in creating the wiki, who don't know anything about the issues which are added to there, because then the information would be written so that everybody understand it. Then also the most basic issues would be added there. This would be good for the new employees.

One reason for the persons not to share the information can be that they want to be the only ones to know it so that they are irreplaceable for the company.

Interviewing the person working in the customer facing role

Interviewer: What kind of information is hard to find inside the company?

Person in customer facing role: Detailed information which is needed every day but which is not stored to anywhere. You might have asked it before but because you need it so rarely, you don't remember it anymore. In my opinion the big process descriptions are well documented and stored but what comes to the details, they can not be found anywhere. For example some tools related issues i.e. how to access the tool, how to get the access, who grants the access, how the approval process goes, who needs to be contacted etc. information might be hard to find.

Interviewer: What kind of information would you like to be added to the wiki?

Person in customer facing role: It is hard to say how the information should be categorized in the wiki. At the moment there should be definitely technical information and general information. There should be information which the new employees could easily use to get a hold of the new role and tasks. This is where the wiki would be really useful.

Interviewer: How would wiki application ease your daily work?

Person in customer facing role: I would search information which is needed in day to day tasks from the wiki. There are also some tasks which are done for example once a year, to which you need every time, the instructions how they were done.

Interviewer: Do you think the persons would participate to the content creation?

Person in customer facing role: Just few would participate to the content creation willingly. So, it really should be created something to encourage people to participate. It is one hard part of this wiki, because wikis considered as a voluntary work. Those persons, who have time, will write the texts to the wiki. It needs to be thought carefully how we could make people to participate. Money could be good way to motivate people.

Interviewer: Would you consider wiki application useful as company's' internal communication method? Why?

Person in customer facing role: It would be excellent communication channel, but it need very much work. It should be thought how the existing systems could be integrated to the wiki, what part of the communication would the wiki replace and what systems and methods to communicate would be working beside wiki.

Interviewer: Do you have anything else to comment on this subject?

Person in customer facing role: It could be planned so that the wiki would be the primary place where the persons would search the information so that you could find the links to the documents through wiki. Then the SharePoints would act as a document storing places only from where the documents could be linked to the texts in wiki.

Interviewer: Do you see any challenges in the wiki?

Person in customer facing role: I think the major challenge is to make people to participate.

Interviewing the account team member

Interviewer: What kind of information is hard to find inside the company?

Account team member: The information included in the contract made with the Customer X and especially the interpretation of the details in the contract. The working instructions based to the contract is hard to find. The problem is that there is a lot of information and it is not structured.

Interviewer: What kind of information would you like to be added to the wiki?

Account team member: The ideal would be that there would be a directory from where all the information would be found. The existing documents should be linked to the wiki. The ideal would be that all the information would be in the same place but it is not possible because there is different level information which can not be shared to everybody.

Interviewer: How would wiki application ease your daily work?

Account team member: Everyone faces every day issues where they need to search information for example from best practises, processes etc. When there's a question people start to think where the information could be found or who to contact. The first thing to do would be to go to the wiki and check if there's anything about the issue there. Is the issue been defined, is there an answer to the issue.

Interviewer: Do you think the persons would participate to the content creation?

Account team member: It would be important that the information would be easy to add to the wiki and that it would be easy to find from there. So the structure and search qualities in wiki are important. For example if someone asks something from you in an email, you could answer to his question and add the question and the answer easily also to the wiki. The threat is that the person does not find that something has already been defined to the wiki and creates new text about the same issue or that the person adds wrong information to the wiki. I believe that persons will participate if the tool is easy to use.

Interviewer: Anything else?

Account team member: The language need to be English so that the wiki would serve all the users in this global department. Second thing is that this wiki needs to be only for company's internal use. Customer shared wiki wouldn't work because of the different views and ways to interpret things.

The threat is that the people can be lazy and not participate to the content creation. However if the initial content is already created at the beginning it will encourage people to participate. Wiki is not always the right source to find for example contract information. However it can help to find out whom to contact and what is the main idea behind the issue.